NOTES.

The subject of the address to be delivered by Sir William Ramsay at the annual meeting of the British Science Guild to be held this afternoon is "The National Organisation of Science." Owing to the war, the annual dinner of the guild will not be held this year.

The annual general meeting of the Eugenics Education Society will be held this afternoon at the Grafton Galleries, Grafton Street, W., and the presidential address will be delivered by Major Leonard Darwin upon the subject, "Eugenics During and After the War."

Sir Almroth Wright has been awarded the Lecomte prize by the Paris Academy of Sciences. The prize, which is of the value of 2000*l*., is awarded triennially.

We notice with much regret the announcement of the death on June 26, from heart failure, of Dr. R. H. Lock, inspector at the Board of Agriculture and Fisheries, sometime fellow of Gonville and Caius College, Cambridge, at thirty-six years of age.

Mr. Tennant said in the House of Commons on June 23 that practically all the laboratories in the country have been placed at the disposal of the War Office. Great benefit has been derived by the War Office from advice and information received from the Royal Society, the National Physical Laboratory, the universities, and other bodies, and Mr. Tennant took the opportunity of conveying to these scientific and learned bodies the thanks of the Army Council.

In the House of Commons on June 28, Sir Philip Magnus asked the Prime Minister whether, having regard to the necessity for the purposes of the war of organising the services of fellows of the Royal Society and of other scientific bodies and also of the professors and staffs of our universities and technical schools, and of mobilising the scientific and technical resources of the laboratories and workshops of such institutions, and, having regard to the importance of creating a central committee or bureau for considering scientific problems that arise out of the war, for testing and developing inventions from whatever source they may originate, and reporting upon them to the special Department of State concerned, he will afford an opportunity of discussing the subject in the House? The reply of the Prime Minister was that opportunities would arise for this discussion.

A useful ethnological collection has been made in Siberia by the University of Pennsylvania's expedition, according to news recently received in Philadelphia from its leader, Mr. H. U. Hall. Last summer was spent by the party among the Samoyed and Dolgan tribes, and last winter among the Tungus and Yakuts, between the Yenisei and Lena Rivers. The effect of the war has been felt by the expedition in raising the prices of everything and making "transportation" difficult.

The annual meeting of the General Board of the National Physical Laboratory was held in the rooms of the Royal Society on Tuesday, June 15, when the annual report and accounts for the year 1914–15 were adopted for presentation to the president and council of the Royal Society, and the programme of work for the coming year was approved. This year the usual gathering of visitors at Teddington, to meet the members of the General Board and to inspect the laboratory, will not take place. Twenty-five per cent. of the staff are on active service.

The council of the Royal Society of Arts has arranged with Prof. Vivian B. Lewes to give a short course of special lectures during the recess on "Modern Munitions of War." Three lectures will be given, on Wednesday afternoons, July 7, 14, and 21. The first lecture will deal with "Guns and Propellants," the second with "Mines, Shells, and High Explosives," and the third with "Poison Gases and Incendiary Bombs." The course will be under the Fothergill Trust. The lectures will be open to all fellows of the society, who can admit their friends personally, or by the usual tickets. Tickets will also be issued gratuitously to any persons interested in the subject who may apply to the secretary, Sir Henry Trueman Wood, at the offices of the society.

Engineering for June 25 announces the death of Mr. Charles Colson, C.B., late Deputy Civil Engineer-in-Chief of the Admiralty. Mr. Colson, who died at St. Leonards on June 8, at the age of seventy-six, was connected with the War Department in early life, and joined the Admiralty in 1866. For many years he was assistant-engineer on the Portsmouth Dockyard extension. In 1883 he was selected to go to Malta to design a new graving dock for the Navy at that port. He held the post of Superintending Civil Engineer of Devonport Dockyard from 1892 to 1894, when he was appointed Assistant-Director of Civil Engineering Works at the Admiralty. He was the author of a book on docks and dock construction which has been widely used, and he contributed several papers to the Proceedings of the Institution of Civil Engineers.

We record with regret the death of Mr. Howard Marsh, master of Downing College, and professor of surgery in the University of Cambridge. He died at The Lodge, Downing College, on June 24, aged seventy-five. After receiving his training at St. Bartholomew's Hospital he applied himself to surgery, becoming lecturer on surgery at his school. He was justly regarded as a leading authority on diseases and treatment of joints. He was an active member of the council of the Royal College of Surgeons, advocating the enfranchisement of the members of the college. In 1903, when he had reached an age at which many consultant surgeons seek retirement, he entered a new field of endeavour as professor of surgery in the University of Cambridge, where his energy and public spirit were given full scope. In 1907 he became master of Downing, succeeding Dr. Alex. Hill. His predecessor in the chair of surgery was the late Sir George M. Humphry.

It is a wonderful story, in the *Daily Chronicle* of June 23, of the death of Dr. Chaillou. He was head of the anti-rabies department of the Pasteur Institute in Paris. Those of us who remember the war of 1870–71 will remember what havoc it made of Pasteur's work. The institute had not then been founded; the work was done in the laboratories in the rue d'Ulm. Pasteur's young men went off to the war; Henri Ste. Claire Deville met his death there. When Pasteur died, in 1895, Roux was his successor, as head of the institute. History repeats itself; the Pasteurians have gone off to the war; and Chaillou has met his death there. On April 21 he had "demanded and obtained the perilous mission of disinfecting a battlefield near the enemy's trenches." At night, alone, he "reconnoitred the position"; he found work enough for twelve nights; the state of the battlefield must not be described here. On the night of April 24 he was within seven yards of the enemy's trenches, and was killed. Strange, to think of this man of science, accustomed to work of the very utmost minuteness and microscopical accuracy, stumbling about, in the dark, with a tin of disinfecting powder, among the piles of unburied dead. Shells fell on him and his men: eleven were killed. Every day and every night precious lives, cultured and expert men, are flung away like this. We say that there will be a "shortage of doctors" when the war is over; but we scarcely stop to think of the tragedy in that off-hand phrase. The waste of the lives of the experts is terrible. Here was a man trained and disciplined in one of the most complex of all the sciences; and he is put to scavenging, to the very roughest and least skilled work, and he lays down his life for his friends over that. May his name live in the great institute where he worked more delicately for the good of mankind.

BY the death of Dr. G. C. M. Mathison, which took place at Alexandria on May 20, in consequence of wounds received in Gallipoli, the sciences of physiology and pathology have suffered a serious loss. The taking away of young and enthusiastic workers, of which this is by no means the only instance, is one of the saddest things in the war. Dr. Mathison's chief scientific work was concerned with the analysis of the phenomena of asphyxia in its effects on the nervous system. He showed that the results both of deficient oxygen supply and also of increased accumulation of carbon dioxide are due to a common factor, namely, the rise of hydrogen-ion concentration in the blood. The various nerve centres were shown to be sensitive in different degrees to this agent; thus the bulbar centres are excited by one-fifth of the increase that the spinal centres require. In deprivation of oxygen without accumulation of carbon dioxide, it was shown that acids may be produced by disorganisation of the cells of the nerve centres themselves, a process which takes place suddenly and must be regarded as pathological. Deficiency of oxygen was found also to produce heart block by depression of conductivity in the auriculo-ventricular connection. In work done with the collaboration of Barcroft, Mathison showed that the rate at which oxyhæmoglobin gives up its oxygen to the tissues is greatly increased by a rise in the concentration of hydrogen ions, and that rises of such an extent as to be of importance in tissue respiration may occur when the oxygen supply is deficient. The effect of potassium on the vascular system was also investigated and found to be of a dual nature. While it is depressant on the heart, it produces contraction of the arterioles, both by direct action upon the muscular fibres and by excitation of vaso-constrictor centres in the spinal cord and the bulb.

THE death of Lieut. R. B. Woosnam, killed in action at the Dardanelles on June 4, adds one more name to the steadily increasing list of workers in science who have given up their lives for their country in this great war. Lieut. Woosnam served with the 2nd Worcestershire Regiment in the South African war, and it was during that period that he first became known to the Natural History Museum by sending to that institution a number of small mammal and bird skins prepared so well that it was at once noticed that they were the work of a skilled collector and true naturalist. At the close of the war Woosnam offered his services to the museum as a collector, and on the offer being accepted he gave up soldiering for the time being. In his new capacity he carried out a difficult piece of zoological exploration through the Kalahari desert to Lage Ngami, and in October, 1905, he was appointed leader of the important expedition organised by the museum for the exploration of the Ruwenzori range in equatorial Africa. His companions were Mr. R. E. Dent, a former brother officer in the Worcestershire Regiment, the Hon. Gerald Legge, Mr. Douglas Carruthers, and Mr. A. F. R. Wollaston. The expedition reached a height of 16,794 ft., and Woosnam records that butterflies, moths, and diptera were seen on the snow up to 16,000 ft., blown there by the almost constant wind. On the bare rocks above the snow-line a few worms, lichens, and mosses were seen. As a result of the undertaking the National Museum was enriched by a large number of species new to science, and a very valuable addition made to our knowledge of the fauna and flora of tropical Africa. In 1911 Woosnam was appointed by the Secretary of State for the Colonies game warden in British East Africa. He very quickly surmounted the difficulties of the position, and it speaks volumes for the fine nature of the man that though he carried out his duties in the strictest manner and confiscated with unsparing hand illegally obtained sporting trophies and other objects, there was no more popular official in the Protectorate. He was mainly instrumental in getting together the International Conference for the Protection of Wild Animals in Africa which met in London last year. It is no secret that he formulated stringent plans, which were virtually adopted, for the effective carrying out of the object of the conference. Now, alas! all this is at an end, and with it has passed away a man of sterling character, of a lovable disposition, modest and unassuming almost to a fault, an unflinching adherent to duty.

THE thirteenth annual session of the South African Association for the Advancement of Science will be held at Pretoria, from Monday, July 5, to Saturday, July 10, inclusive, under the presidency of Mr. R. T. A. Innes, Union Astronomer. The sections and their presidents will be as follows:—*A*—Astronomy, Mathematics, Physics, Meteorology, Geodesy, Surveying, Engineering, Architecture, and Irrigation, F. E. Kanthack; *B*—Chemistry, Geology, Metallurgy, Mineralogy, and Geography, H. Kynaston; *C*—Bacteriology, Botany, Zoology, Agriculture, Forestry, Physiology, Hygiene, and Sanitary Science, C. P. Lounsbury; *D*—Anthropology, Ethnology, Education, History, Mental Science, Philology, Political Economy, Sociology, and Statistics, J. E. Adamson. Among the papers to be read are the following:—The fault system of the south of Africa, Prof. E. H. L. Schwarz; Some South African radio-active minerals, Prof. P. D. Hahn; Darwin's theory of natural selection, tested in the light of our knowledge of Crassulaceæ, Prof. S. Schönland; The economy of termites, C. Fuller; The history of the ostrich industry in South Africa, R. W. Thornton; Anti-venomous serum and its preparation, F. W. FitzSimons; The inheritance and characters of certain cross-bred sheep, J. Burtt-Davy; The Bagananoa (Malaboch), with notes on the traditional history of the tribe, Rev. N. Roberts; Sesuto etymologies, Rev. W. A. Norton; practical education, W. J. Horne; and The economics of the east coast fever, Rev. J. R. L. Kingon. A popular evening discourse will be delivered by Mr. C. W. Mally, on the house-fly under South African conditions, and one by Dr. E. T. Mellor on the Witwatersrand Goldfields. The medal and grant for 1915 have been awarded to Mr. C. P. Lounsbury, chief of the division of entomology, Union Department of Agriculture, and will be presented during the session.

The National Clean Milk Society (2 Soho Square, London, W.), which has been formed to improve the milk supply of Great Britain and Ireland, has published a pamphlet showing how by a system of marks it is possible to conduct the inspection of dairy farms in an efficient and educational manner. The score-card system which has been developed so largely in the United States for judging stock, agricultural produce, etc., has also been applied to the inspection of dairy farms, town dairies, etc. By making alterations that would bring the score-card more in touch with British conditions, it has been possible to arrive at what promises to be a most satisfactory way of judging of the sanitary condition of any farm that is producing milk for human consumption. The score-card is divided into two main sections, one section dealing with equipment, the other with methods, and 60 per cent. of the total marks is allotted to the latter. Most excellent explanatory notes are appended to the score-card, and are presumably intended for the guidance of the inspector. A perusal of them would be of great value to the farmer himself, for frequently lack of cleanliness is due more to failure to appreciate the necessity of being careful in the handling of such an important food as milk than to any desire to evade regulations. Sanitary inspectors in particular should see this pamphlet, and if every landowner would take the trouble to observe how large a proportion of marks on the score-card depend upon the cowshed there might be improvements in farm buildings.

Dr. R. Hamlyn-Harris, the director of the Queensland Museum, has set himself the task of forming a collection of the "Implements of Superstition and Magic" used by the natives of Queensland. As these are dying out with appalling rapidity, ethnologists the world over will be grateful to him. A most welcome summary of the results so far achieved appears in vol. iii. of the Memoirs of the Queensland Museum. He prefaces his account with a word of warning which in the interests of science cannot be too widely circulated. The wily aboriginal, having discovered that his implements and weapons have a marketable value, has taken to manufacture on an extensive scale, but such specimens bear, in every detail, the mark of the bungler. Nevertheless, it would seem that tons of material are being exported to museums all over the world by unscrupulous dealers who are inciting the natives to pursue this reprehensible means of obtaining money or its equivalent. Death-bones, quartz crystals, magic stones, and rain-sticks are severally described in this essay, which contains a valuable collection of myths and customs which are fast disappearing.

The concluding portion of the paper by Prof. Flinders Petrie on the Stone age in Egypt, published in *Ancient Egypt*, part iii., for 1915, raises a very interesting question of synchronism. The writer notices a striking resemblance between the coarse flakes which abound in prehistoric Egyptian graves with those of the Magdalenian Cave type. In other cases the snubbing of the edge by scraping is characteristic of European Aurignacian flints. The Magdalenian flint types in Egypt are associated with bone harpoons, which are also of that age in Europe. A bone harpoon found in Egypt belongs to the first and part of the second prehistoric civilisation, say 8000–6000 B.C. "This," he writes, "raises the question whether it will be possible to extend the Magdalenian Cave period as late as the Egyptian graves of about 7000 B.C., or to trace a descent of the type to a later time. This connection is an additional reason for keeping to the Egyptian chronology, and not adopting the arbitrary theories of Berlin which would bring down these Magdalenian types to about 3500 B.C." This suggestion of a possible synchronism between the Cave periods of Europe and graves in Egypt which can be dated with some approach to certainty may lead to important results. It is unfortunate that so much haphazard collection of flints has gone on in Egypt, without regard to their seriation or characteristics, and thus evidence of much value has been lost.

The Miocene insect beds of Florissant, Colorado, promise to yield an even richer harvest than the celebrated beds of Oeningen in Baden. Prof. T. D. A. Cockerell, in the Proceedings of the Academy of Natural Sciences of Philadelphia (part iii., vol. lxvi.), describes a number of species new to science collected by Prof. Wickham. In an excavation about 20 ft. long and 6 ft. deep he obtained more than ninety species of beetles, of which at least forty are new to science. But various other groups are also represented in this collection, of which apparently sixty are new species.

A NEW addition to the list of British fishes is made by Dr. R. F. Scharff in the *Irish Naturalist* for June. This is the long-finned bream (*Brama longipennis*) which was captured on May 18 last year, off the west coast of Valencia Island, Co. Kerry. Though brilliantly coloured at the time of capture, by the time it had reached the island it had faded to a uniform grey hue. Only one other species of the genus has been recorded from Irish waters. This is Ray's bream (*Brama raii*), which was recorded in 1888. To the same number Dr. Scharff contributes some interesting notes on Irish sharks.

THOUGH observations on the birds attracted to lightships and lighthouses during migration have been kept with much exactness during a number of years, no similar records had been made in regard to insects which in like manner are attracted by light, until recently, when the matter was taken up by Mr. W. Evans. The conclusion of his report on Lepidoptera and other insects at Scottish lighthouses appears in the *Scottish Naturalist* for June. It is usual, he remarks, "to think of moths alone as night-fliers, and attracted by light, but . . . not a few other insects have similar habits, and are similarly attracted. . . . Both sexes come to the lanterns, but as a rule males predominate." He also makes some interesting observations on the dominance of certain colour variations.

CONCHOLOGISTS will doubtless welcome the announcement of the rediscovery of Pourtales's Haliotis. This is made by Mr. J. B. Henderson in the Proceedings of the U.S. National Museum (vol. xlviii., 1915). The first intimation of the occurrence of this genus in western Atlantic waters dates so far back as 1869, when a specimen was dredged up in the Straits of Florida. This was unfortunately destroyed in the great Chicago fire before it could be described. Twenty years later it was described from memory by Dr. Dall, who named it in honour of Count Pourtales, under whose supervision the original dredging operations were carried out. Two years ago Mr. Henderson, while dredging from the *Eolis*, along the inner edge of the Pourtales Plateau off West Key, in ninety fathoms, secured a second specimen of Haliotis, which proved on examination to be an immature specimen of the long-lost Pourtalesii.

THE reclamation of peat bogs is always a matter of economic importance, and the results achieved by sowing *Pinus pinaster* directly on a peat-bog, described in *Irish Gardening* for June, are worthy of wider notice. Two photographs are reproduced, one showing the depth of the peat where the seeds were sown in the west of Ireland, the other three of the young trees, four years old. The soil is fatal to the Scots Pine, but *P. pinaster*, if sown on the spot, thrives remarkably. The tree transplants badly, and for this reason the success attending the method adopted at Abbeyleix by Mr. Macgregor is very interesting.

NO. XXVIII. of vol. vi. of Notes from the Royal Botanic Gardens, Edinburgh, for May, is occupied by a useful paper in the form of a key to the Labiatæ of China, by Mr. S. T. Dunn. The key is based largely on the collections in the Hong Kong herbarium, and has been constructed on practical lines. Hong Kong being essentially the key to the botanical position as regards China, we welcome any work, based on the collections of that herbarium, tending to set out in orderly form the vast wealth of the Chinese flora as regards particular natural families. Even now it is not possible to arrive at a definite phytogeographical survey of the empire as regards any one group of plants, but a key such as that just published is of value in helping forward the more detailed study of the flora of China.

THE condition known as Peloria, in which the exceptional development of complementary irregularities make a typically irregular flower regular, is fairly commonly met with in foxgloves and snapdragons under cultivation; indeed, in both plants a definite varietal form, with either the terminal or all the flowers peloric or regular, appears to be fixed and to come true from seed. In the foxglove the variety is known as var. *monstrosa*, and the terminal flower is a more or less regular erect bell, similar to the flower of a Campanula. In Antirrhinum a varietal form has been so far fixed by Lorenz, of Erfurt, that 60 per cent. of the plants raised from seeds bear peloric flowers; this form is figured in "Gartenflora" (1904, p. 113, t. 1524). Here all the flowers are tubular and perfectly regular, but a form recently received from a correspondent resembles the foxglove, variety *monstrosa*, in having the terminal flower only regular, with the characteristic lower lip of the snapdragon, forming a complete fringe round the actinomorphic tubular flower, while all the other flowers are zygomorphic. A further peculiarity of these pleoric varieties is that the terminal flower of the raceme is the first to open, whilst in normal forms the terminal flower is the last to expand.

HELMHOLTZ's magnification formula of our elementary text-books on optics is known to be a particular case of a number of interesting reciprocal theorems; for example, the property that in a system of lenses the *angular* diameters of the object and image as seen from any position are inversely proportional to the *linear* diameters of the sections of the incident and emergent small pencils where they meet the eye. In the *Atti dei Lincei*, xxiv., 7, Prof. Levi Civita gives a general dynamical investigation of these reciprocal relations, including Straubel's theorem, and with applications to multi-dimensional hyperspace. This is based on the analogy between trajections in dynamics and paths of rays, which analogy results from the principles of least action and time respectively.

THE rapid increase of the electrical resistance of pure iron with temperature makes it very desirable that the behaviour of iron resistance thermometers should be thoroughly investigated with a view to their introduction into common use. Such an investigation has been made by Messrs. G. K. Burgess and I. N. Kellberg, of the United States Bureau of Standards, and the results are published in the May number of the journal of the bureau. The wire used was 99·98 per cent. iron, 0·24 millimetre in diameter, and was wound on a porcelain insulator and enclosed with a similar platinum wire in an evacuted quartz tube. Six such combined thermometers were made and annealed at 1000° C. In the subsequent comparisons of the resistances of the platinum and iron wires at various temperatures the resistances were determined to the equivalent of 0·005° C. In all cases the resistance of pure iron was found to increase regularly to about 750° C., the temperature coefficient of increase reaching a maximum about seven times that of platinum at that point. At 757° C. the critical point A2 is reached, and the coefficient decreases. At 894° C. the second critical point, A3, is reached, and the resistance decreases over a range of 10° C., to increase again at higher temperatures. On cooling the A3 change occurs at 880° C., while the A2 change occurs again at 757° C.

THE June issue of the *Journal* of the Franklin Institute contains a second paper by Sir Robert Hadfield on sound steel for rails and structural purposes, the first having been published in February. The present paper gives some details of the production for the Pennsylvania Railway Company of one hundred tons of rail ingots made at Sheffield under his "sound steel" system. The dimensions of the ingots were 5 ft. 4 in. by 18 in. square. They were fed from sandheads, which permitted an average of 130 lb. of fluid steel to pass into the ingot, which contracted during freezing, thus continuously "following up" any pipe that tended to be formed. The average capacity of the cavity on the top of the ingots was 3·19 per cent. of the total capacity of the ingot. The author claims that after cutting off 10 per cent. from the top of the ingot the remaining 90 per cent. is sound, entirely free from blowholes, segregation, or piping. Ingots sectioned through the long axis and photographed appear to bear out this contention, at any rate so far as soundness is concerned. In the rail ingot, as ordinarily cast, a discard of upwards of 40 per cent. is sometimes necessary, and even in the sound portion segregation is always present to a greater or less extent. It is interesting to note that the average carbon percentage in the ingots is 0·63—a considerably higher figure than any English railway company permits. This gives a harder but more brittle rail. The wear in practice of rails rolled from these ingots will be watched with considerable interest.

THE *Scientific American* celebrated its seventieth anniversary on June 5, and the number for this date contains an interesting retrospect through the inventions and scientific discoveries of the past seventy years. When the journal was first established, we had only Davy's arc and electrolysis, Oersted and Ampère's revelations in electrodynamics, Daguerre's photography, Henry and Faraday's work in induction, and Joule's mechanical equivalent of heat. The telegraph and the reaper had just been born. Much of the transformation which has marked the last seventy years has taken place within the lives of men still with us. Prior to the invention of the telephone, our contemporary considers that the decade 1840-50 was the most fruitful in invention; during this period the reaper, the vulcanisation of rubber, the sewing-machine, and the telegraph were perfected. The decade beginning with 1880 saw an outburst of inventive activity that dwarfed all similar periods in the history of invention. It seemed that the discoveries in electricity during the last three or four years of the previous decade had been the signal for the pent-up genius of the world to be let loose. In the 'eighties the generation, transmission, and utilisation of current, the dynamo, the transformer, and the motor were all made practical propositions on a large and commercial scale for the first time. The electric furnace was perfected in the latter part of this period. The Harvey process for hardening armour plate was invented in 1888; smokeless powder, the Westinghouse brake, the transparent film which foreshadowed the moving picture and the pneumatic tyre are also contributions of the same decade. There are a large number of photographs of historical inventions and inventors included in this number, and there is also an interesting autobiographical sketch by Mr. Nikola Tesla.

IN view of the great interest at the present time in the Conventions and signed Declarations of the First and Second Hague Conferences, and particularly because of the need of accurate information as to ratifications of and adhesions to the Conventions and Declarations relating to war, the Carnegie Endowment for International Peace has prepared a series of pamphlets in order that the public may learn from trustworthy sources the status of these international agreements and the extent to which the Powers now at war are bound by their provisions. We have received copies from Washington of seventeen of these pamphlets, and find that among the subjects of vital importance considered are: the declarations of 1899 concerning asphyxiating gases and expanding bullets, and prohibiting the discharge of projectiles and explosives from balloons; and the conventions of 1907 relative to the laying of automatic submarine contact mines and concerning bombardment by naval forces in time of war.

THE Open Court Company, 149 Strand, W.C., has ready for publication "A Budget of Paradoxes," by Augustus de Morgan, revised and edited, with full bibliographical notes and index, by Prof. David Eugene Smith, professor of mathematics, Teachers College, Columbia University, New York.

MESSRS. G. P. PUTNAM'S SONS announce for early publication:—"The Alligator and its Allies," by Prof. A. M. Reese; "Plane Trigonometry," by Prof. A. M. Harding and J. S. Turner; and "Field Book of Western Wild Flowers," by M. Armstrong and Prof. J. J. Thornber.

THE announcements of the Cambridge University Press include:—"Mimicry in Butterflies," by Prof. R. C. Punnett; "The North-West and North-East Passages, 1576-1611," edited by P. F. Alexander (the first volume in the series of "Cambridge Travel Books"); and "Stories of Exploration and Discovery," by A. B. Archer.

ERRATA.—In Prof. O. W. Richardson's Royal Institution discourse printed in NATURE of June 24, p. 468, col. 2, line 12, for "twice" read "half"; p. 469, col. 1, table, for "calories per n" read "calories per gram-molecule of electrons."